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IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

WSOU INVESTMENTS, LLC, d/b/a BRAZOS LICENSING AND DEVELOPMENT, Plaintiff, v. HEWLETT PACKARD ENTERPRISE COMPANY, Defendant.	Civil Action No. 6:20-cv-00725-ADA Civil Action No. 6:20-cv-00726-ADA Civil Action No. 6:20-cv-00727-ADA Civil Action No. 6:20-cv-00728-ADA

DEFENDANT'S SURREPLY *MARKMAN* BRIEF

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NO.   **DESCRIPTION**

INCLUDED IN HPE RESPONSIVE *MARKMAN* BRIEF

1   U.S. Patent No. 7,280,534

2   Newton's Telecom Dictionary (16th and a Half ed. 2000)

3   USPTO Examiner's Amendment, dated June 7, 2007

4   U.S. Patent No. 7,386,630

5   Applicant Arguments/Remarks, dated October 30, 2007

6   Applicant Arguments/Remarks, dated May 4, 2005

7   USPTO Notice of Allowance, dated February 1, 2008

8   U.S. Patent No. 7,443,832

9   U.S. Patent No. 7,519,056

10   Transport of Layer 2 Frames Over MPLS Memo dated April 2002, Martini et al.

11   Declaration of Paul S. Min, Ph.D., dated March 1, 2021

12   RFC 5036 – LDP Specification, dated October 2007

13   RFC 3036 – LDP Specification, dated January 2001

14   RFC 2702 – Requirements for Traffic Engineering Over MPLS, dated September 1999

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15   U.S. Patent No. 7,280,534 Infringement Contentions

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Defendant Hewlett Packard Enterprise Company ("HPE") submits this surreply brief in response to WSOU's Reply Claim Construction Brief (Dkt. No. 42) ("Reply") addressing terms of U.S. Patent No. 7,280,534 ("the '534 Patent"); U.S. Patent No. 7,386,630 ("the '630 Patent"); U.S. Patent No. 7,443,832 ("the '832 Patent"); and U.S. Patent No. 7,519,056 ("the '056 Patent"). This brief addresses the claim terms or phrases that the parties dispute across these four patents.

I.   THE '534 PATENT CLAIM TERMS

A.   WSOU's Overarching, and Repeated, Errors of Law

Before addressing the '534 Patent's specific terms at issue, two fundamental and interrelated errors that permeate WSOU's discussion of this patent should be addressed.

1.   It is Legal Error to Ignore the Specification

WSOU suggests that lexicography and disavowal are the only two exceptions to the rule that a claim term should be accorded its plain and ordinary meaning. Reply at 3–5, 7. WSOU's argument, however, ignores the Federal Circuit's repeated holdings that the specification is always relevant in claim construction.

For instance, in *SciMed Life*, the Federal Circuit rejected an argument much like WSOU's:

> [T]he written description can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed, even if the guidance is not provided in explicit definitional format.

SciMed Life Sys, Inc. v. Advanced Cardiovascular Sys, Inc., 242 F.3d 1337, 1344–45 (Fed. Cir. 2001). Building on that theme, the Federal Circuit held in *Bell Atlantic*: "In other words, the specification may define claim terms 'by implication' such that the meaning may be 'found in or ascertained by a reading of the patent documents.'" *Bell Atlantic Network Services, Inc. v. Covad Commu'n Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001). And, in *UltimatePointer*,

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the Federal Circuit explained:

> UltimatePointer's argument that a court may only deviate from the ordinary meaning when there is an explicit definition or disclaimer does not apply because the ordinary meaning of "handheld device," when read in the specific context of the specification of the '729 patent, is limited to a direct-pointing device.

UltimatePointer, LLC v. Nintendo Co., 816 F.3d 816, 824 (Fed. Cir. 2016). The Federal Circuit also explicitly stated in *Trustees of Columbia University v. Symantec*: "**we reject [the patentee's] argument** that the presumption of plain and ordinary meaning 'can be **overcome in only two circumstances**: [when] the patentee has *expressly* defined a term or has *expressly* disavowed the full scope of the claim in the specification and the prosecution history.'" *Trustees of Columbia University v. Symantec*, 811 F.3d 1359, 1364 (Fed. Cir. 2016) (non-bolded italics in original).[1]

WSOU is simply wrong that disputed terms can be construed in a vacuum while turning a blind eye to the specification. Per *Phillips*, "the specification 'is **always** highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*en banc*) (quoting *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Indeed, *Phillips* was reheard *en banc* specifically to address the *Texas Digital* approach to claim construction, an approach the *en banc* court concluded "improperly restricts the role of the specification in claim construction." *Id.* at 1320 (discussing *Texas Digital Sys, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002). That approach, which the *en banc* court rejected, limited "the role of the specification in claim construction to serving as a check on the dictionary meaning of a claim term if the specification require[d] the court to conclude that fewer than all the dictionary definitions apply, or if the specification contain[ed] a sufficiently specific alternative definition or disavowal." *Id.* (citations omitted). After surveying the case law, the

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[1] Emphases in quotations throughout the brief are added, unless otherwise indicated.

Federal Circuit explained:

> In the end, there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature. While that task may present difficulties in some cases, we nonetheless believe that attempting to resolve that problem in the context of the particular patent is likely to capture the scope of the actual invention more accurately than either strictly limiting the scope of the claims to the embodiments disclosed in the specification or divorcing the claim language from the specification.

Id. at 1323–24.

2.   As Directed by *Phillips*, "Examples" and "Embodiments" Can and Should Inform the Construction of the Claims, and Limit Their Scope

Another related theme in WSOU's brief is the familiar refrain of many patentees attempting to stretch their claims beyond the bounds of the disclosed invention—that nothing from an exemplary embodiment discussed in the specification can or should limit the scope of the claims. But, as the language from *Phillips* above shows, that is not always true. Rather, it depends on a careful review of the specification of the patent at issue. Many other cases echo and amplify *Phillips*' point on this issue.

For instance, in *Medicines Co.*, the Federal Circuit determined the meaning of "efficient mixing" in a patent that included a "detailed description [that] provide[d] a laundry list of mixing techniques that individually (or in combination) may (or may not) constitute efficient mixing." *Medicines Co. v. Mylan, Inc.*, 853 F.3d 1296, 1307–09 (Fed. Cir. 2017). Rather than hold that anything the specification identified as possibly constituting "efficient mixing" was within the scope of the term, the Federal Circuit looked to the lone actual example of "efficient mixing" and limited the term to that example, even though that example was explicitly identified as "non-limiting." *Id.* at 1309. The court did so because that example was:

> not merely the only disclosed embodiment of efficient mixing—it [wa]s the only description of efficient mixing in the patents in suit that casts light on what efficient mixing is and that enables one of ordinary skill in the art to achieve the objects of

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> the claimed invention. … ***[N]o other part*** of the patents' written description ***sufficiently teaches the affirmative steps*** that constitute efficient mixing. In this circumstance, we think it entirely appropriate to limit the term "efficiently mixing" to the sole portion of the specification that adequately discloses "efficient mixing" to the public.

Id (emphasis added). The court thus chose the "non-limiting" example's specific meaning over the "detailed description's open-ended and vague teachings," as "necessary to 'tether the claims to what the specification[] indicate[s] the inventor actually invented.'" *Id.* (quoting *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011)).

Additionally, various Federal Circuit and other cases stand for the related proposition that claims may not enlarge what is patented beyond what the inventor described as her invention, and when the specification "consistently" and "exclusively" describes an element in a certain manner in various embodiments, that is "clearly" what the inventor invented, and informs (and limits) the proper construction of such elements. *Hitachi Consumer Elecs. Co. Ltd., v. Top Victory Elecs. (Taiwan) Co., Ltd.*, No. 2:10-cv-260-JRG, 2012 WL 5494087, at *16 (E.D. Tex. Nov. 13, 2012) ("The 'consistent[ ] and exclusive[ ]' disclosure of 'control signals' as controlling a recording or playback process 'is clearly what the inventors of the ... patent conceived of' and should inform the proper construction of the disputed term.") (quoting *Hologic, Inc. v. SenoRx, Inc.*, 639 F.3d 1329, 1338 (Fed. Cir. 2011)); *see also Nystrom v. TREX Co., Inc.*, 424 F.3d 1136, 1144–45 (Fed. Cir. 2005) (construing "board" to mean "wood cut from a log" in light of specification's consistent use of term, because patentee "is not entitled to a claim construction divorced from the context of the written description and prosecution history"); *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (holding that, where examples or disclosures provided by specification are narrower than claim language might imply (such as by frequently and consistently disclosing certain limitation in specification), it is permissible to limit claims).

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In sum, "[i]t is axiomatic that the claim construction process entails more than viewing the claim language in isolation." *Retractable Techs.*, 653 F.3d at 1305. And as the cases above, *Phillips* included, make clear, the litigation-oriented patentee cannot escape having the scope of his invention limited to what is actually described in the specification by labelling everything (or most everything) depicted an "embodiment" or an "example." If those are the only descriptions of an aspect of the purported invention, they should be used to give meaning to, and limit as applicable, that aspect as it appears in the claims.

B.   "associated IP service controller (IPSC)" (claims 1, 20) / "IP service controller (IPSC) associated with a CE" (claim 24)

WSOU's Reply brief concedes the basic point: The IPSC and CE are distinct. Reply at 2. Indeed, WSOU argues they are so obviously distinct that no construction is necessary. *Id.* (arguing there is "no reason why a person of ordinary skill in the art would be unable to differentiate between the IPSC and the CE based on the claims and specification"). The problem is that WSOU's infringement contentions actually do fail to differentiate between the IPSC and the CE. WSOU makes no attempt to identify an IPSC in the accused products, instead pointing to the same "MCE" as the object performing the functions of both the IPSCs and the CEs of the claims. *See* Ex. 15, '534 Patent infringement contentions (Ex. 1), at 10, 12.

"IPSC" is not a term generally known in the art, and the claims contrast it with a term that is known in the art: "CE" (customer edge). The fact that both are claimed to perform similar functions—sending loop-back/customer addresses to the other—creates the risk, realized in WSOU's contentions, that the two will be conflated. HPE's proposed construction resolves a meaningful dispute between the parties' positions as to what is required for infringement, whereas WSOU asks the Court to commit reversible error by glossing over that distinction. *See O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361–63 (Fed. Cir. 2008).

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The remainder of WSOU's points on reply are immaterial to whether the IPSC and CE must be "at least two distinct mechanisms." Contrary to WSOU's depiction of HPE's argument, HPE does not contend that the IPSC can never include a hardware element. Rather, what matters is that the IPSC and the CE are not just two of the same device, as WSOU apparently believes they can be. HPE also does not seek to limit "customer edges" to switches alone, as opposed to being either switches or routers. Customer edge devices generally (i.e. routers or switches) are what exchange routing information, but the IPSC must be installed on a *switch* (or server), not on other network components like routers, and not existing as its own, freestanding piece of hardware. To the extent WSOU treats the IPSC as a nonce term for anything that executes the claimed steps, that is both contrary to law (which requires nonce words to be construed as means-plus-function terms) and inconsistent with all embodiments in the specification. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350–51 (Fed. Cir. 2015); *Phillips*, 415 F.3d at 1323–24 (Fed. Cir. 2005) (the extent to which disclosed embodiments are limiting is determined on a case-by-case basis); *see also* Section I.A, *supra*.

Finally, WSOU incorrectly argues that "[t]he claims require that the IPSC and the CE are associated with one another for the purposes of carrying out the steps of the claimed method." Reply at 4.[2] This effectively reads the word "associated" out of the claims, contrary to Federal Circuit law on presuming each term to have meaning. *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the

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[2] WSOU's statement is notably at odds with its claim in the only full paragraph on page 3 of its Reply brief that the "IPSC is associated with an edge switch that is part of a service provider network, not with the customer edge device." The claims and specification both contemplate an association between each IPSC and each CE, *see e.g.*, Response Ex. 1, '534 Patent at 7:33–51("At step 410, each CE 122 sends to its associated IPSC … At step 412, each IPSC 130 sends to its associated CE …"). WSOU's contrary statement only further shows the need for construction here.

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terms of the claim is preferred over one that does not do so."); *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004) ("[I]nterpretations that render some portion of the claim language superfluous are disfavored."). WSOU declares "unfounded" the concern that a fleeting, split-second interaction would satisfy the "associated" limitation, but then explicitly argues that a relationship that exists only to execute the claimed set of near-instantaneous computing steps is sufficient. *See* Reply at 4. To the contrary, the inventor's choice to include the word "associated" implies that the bond between IPSCs and CEs is something more than what is merely implied by the other claim terms—it requires at least some level of sustained relationship.

C.   "unique loop-back addresses of customer edges (CE)" (claims 1, 24) / "unique loop-back addresses of other customer edges (CE)" (claim 20)

WSOU inexplicably denies that HPE's responsive brief contained any argument that the loop-back address term required use of an out of band virtual circuit that defines paths by a layer 2 connectivity type. Reply at 4. HPE's argument was simple: the inventor's use of "i.e." signaled an intent to define the term, and HPE proposed a construction comprising the words that followed "i.e." with added clarity on the term "virtual circuit," which is described throughout the '534 Patent as a layer 2 path.

In attempting to argue that the unique loop-back addresses of customer edges may loop back over any connectivity layer, WSOU attempts to read express disavowals of claim scope out of the specification. The specification expressly limits the invention to layer 2 networks and disavows application in MPLS networks. The specification defines the outer bounds of the claims when it says "*[f]or purposes of understanding the invention*, the exemplary network 100 is discussed in terms of an ATM infrastructure, although other embodiments contemplated herein include network infrastructures for frame relay or *any other L2 type architecture*, including

virtual circuits." HPE Resp. Br. (Dkt. No. 39, "Response") Ex. 1, '534 Patent at 3:14–19 (emphasis added). Far from expanding the invention *beyond* layer 2 architecture, the inventor articulated here that the *most* expansive view of the invention was to include *other layer 2 architecture* and that virtual circuits are one such architecture. All the inventor needed to do to avoid limiting the claims was to omit "L2 type" before "architecture." The choice to include it, however, was the logical one given the purpose of the invention: "provid[ing] a method and apparatus that enables a service provider (SP) *having a layer-2 (L2) type infrastructure* to offer BGP/MPLS-*like* managed VPN (Virtual Private Network) services for its customers." *Id.* at 2:51–55 (emphasis added). The disclosures that the invention is *like* MPLS (rather than actually being MPLS) make WSOU's reliance on MPLS standards especially misplaced. By the specification's own terms, those standards were *alternatives* to the claimed invention, not the invention itself.

WSOU's attempt to reverse its concession that "loop-back addresses" are "unique IP addresses" (Reply at 6 n.5) exemplifies its detour from basic claim construction principles. Rather than admit, as it did in its opening brief, that the use of "i.e." is definitional and that "loop-back address" is *at least* limited to a unique IP address, WSOU backtracks and attempts to expand the term to encompass "layer-3 or layer-4 protocols." At a minimum, this double-take manifests the need for some construction beyond plain and ordinary meaning to resolve the confusion. Further, while WSOU makes much of lexicography as a means of limiting claim terms in a specification in other sections of its brief, it disregards that rule for the express definition of "loop-back address" and improperly elevates claim differentiation above lexicography. *See Skinmedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1202 (Fed. Cir. 2013) (plain meaning of "i.e." is "signal[ing] an intent to define the word to which it refers.") (citing *Edwards*

Lifesciences v. Cook, 582 F.3d 1322, 1334 (Fed. Cir. 2009)); *Rembrandt Wireless Techs., LP v. Samsung Elecs. Co.*, 853 F.3d 1370, 1377 (Fed. Cir. 2017) (rejecting argument that "i.e." was not definitional because such construction would create claim differentiation issue); *Retractable Techs.*, 653 F.3d at 1305 ("any presumption created by the doctrine of claim differentiation 'will be overcome by a contrary construction dictated by the written description or prosecution history.'" (quoting *Seachange Int'l, Inc. v. C–COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005)).[3] This is just one instance of WSOU's repeated dismissal of any specification evidence as reflecting "preferred embodiments." As explained above in Section I.A, however, that approach is contrary to law.

D. "broadcasting from said associated IPSC, said IP addresses of said associated customer networks to other IPSCs" (claims 1, 20, 24)

As with the previous term, WSOU attempts to cast the stated purpose of the invention as a mere exemplary embodiment in arguing that the broadcasting limitation is not limited to layer 2 broadcasting. But layer 2 broadcasting is more than just a quirk of particular embodiments. It is the reason for the invention; every embodiment reflects that purpose.

In response, WSOU offers only its erroneous claim that lexicography and disavowal are the sole means of limiting claim language. While the meritlessness of that argument is discussed at length in Section I.A above, even the specific cases WSOU cites here are inapposite. HPE's construction is consistent with *Thorner* because it is based on more than just the presence of a feature in each disclosed embodiment. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012). That something more is a statement of the invention's purpose and

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[3] WSOU itself uses "i.e." as definitional in its brief, complaining that HPE labelled the IPSC and CE as "'mechanisms,' *i.e.*, software" before going on to argue that the IPSC and CE could be something more than just software. Reply at 2. That complaint would make little sense if "i.e." merely introduced an example, as WSOU suggests it does in the '534 Patent specification.

expressly limiting language regarding layer 2. '534 Patent at 2:51–55 ("*the present invention* provides a method and apparatus that enables a service provider (SP) having a layer-2 (L2) type infrastructure to offer BGP/MPLS-like managed VPN (Virtual Private Network) services for its customers"); *id.* at 3:14–18 ("the exemplary network 100 is discussed in terms of an ATM infrastructure, although other embodiments contemplated herein include network infrastructures for frame relay or *any other L2 type architecture*"). The patent in *Northrop Grumman* similarly lacked anything beyond the disclosure of a feature that happened to be common to all embodiments, and in fact concerned open language surrounding "one of" several "objectives" or "advantages" of the invention. *Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1355 (Fed. Cir. 2003). By contrast, the '534 Patent discloses a single purpose: to provide layer 3-like functionality on a layer 2 network. It simply does not make sense to practice the claims in a non-layer 2 environment, and the entirety of the specification indicates that the boundaries of layer 2 are the boundaries of the invention.

II.   THE '630 PATENT CLAIM TERMS

A.   "a customer policy comprising a tunneling mode and a tunnel group identifier" (claims 1, 12, 18)

Contrary to WSOU's position, a "customer policy" is most certainly a policy that is utilized by a network user. The "customer policy" is "deployed to the policy targets," which goes "across at least part of the network" in order to "govern the treatment of individual customer traffic" across that network. HPE Resp. Br. (Dkt. No. 39, "Response") Ex. 4, '630 Patent at 7:4–5, 10:25–26, 10:52–56. Because these customer policies govern the treatment of customer traffic across a network, and because they are being utilized and implemented by an individual, a group of individuals, or an organization that is *using a network*, it is inconceivable how a customer policy can somehow *not* be the policy of a network user.

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It is also beyond reasonable debate that the Applicants defined the term "tunnel[ing] mode"[4] in the specification and reiterated it during prosecution. The '630 Patent explicitly states what tunneling mode is:

> Tunneling mode defines the method of translating the Diffserv information in the MPLS headers (labels and EXP field) into the DSCP value in the encapsulated IP header when packets exit the MPLS network. There are two essential modes of tunneling: pipe mode and uniform mode. For pipe mode, the egress router keeps the DSCP of the encapsulated IP header. For uniform mode, the egress router overwrites the original DSCP with the DiffServ information contained in the MPLS Shim Header[,]

Response Ex. 4, '630 Patent at 2:62–3:5. It further specifies that "[t]unneling mode decides which DSCP code point is carried in the IP headers when a packet exits the MPLS network." *Id.* at 8:13–14. The Applicants pointed out and emphasized during prosecution, numerous times, that they had defined this "tunnel mode" throughout the '630 Patent's specification. For instance, the Applicants argued to the Examiner that "***[a] tunneling mode is defined in the description***," that "***applicants' specification explains that*** '[t]unneling mode defines the method of translating the Diffserv information in the MPLS headers (labels and EXP field) into the DSCP value in the encapsulated IP header when packets exit the MPLS network,'" and that the prior art did not disclose the limitations "***as defined by the specification***." Response Ex. 5, Applicants' Arguments/Remarks of October 30, 2007, at 12–13; Response Ex. 6, Applicants' Arguments/Remarks of May 4, 2005, at 11. The Applicants' own characterizations confirm that they sought to define the term "tunnel mode," and actually did so throughout the '630 Patent. As a result, their clearly and explicitly provided definition should be adopted.

Finally, as to the "tunnel group identifier" portion of this phrase, it is difficult to ascertain exactly what WSOU's argument is. As discussed in HPE's responsive claim construction brief,

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[4] Claim 1 refers to a "tunnel mode" and claims 12 and 18 refer to a "tunneling mode."

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a tunnel group is "a set of tunnels that share the same properties and form a certain topology, such as a mesh or star." Response Ex. 4, '630 Patent at 7:41–43. During prosecution, the Applicants stated that "[their] specification explains that a tunnel group 'is a set of tunnels that *share the same properties and form a certain topology*'" and that the prior art did not disclose the Applicants' invention because it "d[id] not disclose or suggest any equivalent grouping, *or a single identifier for such grouping*." Response Ex. 6, at 10–11. WSOU asserts the Applicants did not make "narrowing amendments" to distinguish the prior art, but that is a non-sequitur. As quoted, they made arguments regarding what the art did not disclose, that they asserted was needed to satisfy the claims. "[W]here the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003); *see also Digital Retail Apps, Inc. v. H-E-B, LP*, Claim Construction Order, 2020 WL 376664, at *8–9 (W.D. Tex. Aug. 19, 2020) (finding patentee's "disclaimer could not be any clearer" when it characterized and distinguished a prior art reference during prosecution). The Applicants here thus made a clear and unmistakable disavowal (to the extent they had not already so defined the term in the specification). As such, the Applicants' own statements and definition should be adopted in construing "tunnel group identifier" to mean "a named identifier of groups of network tunnels with similar properties that form a certain topology."

B.   "corresponding to the tunnels" (claim 1)

Contrary to WSOU's argument, it is not self-evident that the antecedent basis for "the tunnels" is the "multi-protocol label switching tunnels." The '630 Patent Applicants explicitly chose to use two distinct phrases—"multi-protocol label switching tunnels" and "the tunnels"— rather than using "the multi-protocol label switching tunnels," or "said multi-protocol label

switching tunnels," in place of "the tunnels," either of which would have clarified the intent to refer back.

Further, the structure of the claim does *not* support concluding "corresponding to the tunnels" modifies "at least one of the network devices." The same clause of the claim refers to "the mapping policy," "the customer policy," "interfaces of devices of a network," "multi-protocol label switching tunnels," "tunnels," "network devices," "an egress interface," and "a same role name," and it is unclear to which of these elements the tunnels are intended to correspond.[5] WSOU argues that "at least one of the network devices" is the claim element that is "corresponding to the tunnels," but WSOU is only able to do so by selectively quoting that portion of the claim, reshuffling the sequence of the phrases, and ignoring all of the other elements that are present within the same clause. Reply at 12. WSOU's need to resort to such redrafting underscores that the claim is ambiguous, unclear, and indefinite.

C.   "policy targets" (claims 12, 18)

The "policy targets" of claims 12 and 18 lack a proper antecedent basis and are not properly introduced by the claims. There are numerous ways that the "policy targets" could have been introduced in a proper manner that is grammatically correct (e.g., "a set of policy targets," "one or more of a policy target," etc.). Yet the claims do not contain any proper introduction for this term that establishes its place in the purported invention, nor do they provide any antecedent basis to which the "policy targets" could refer back. WSOU does not cite any authority for its proposition that a claim term need not be explained or introduced via the claim language. Reply

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[5] The full text of the clause is: "send the mapping policy and the customer policy to interfaces of devices of a network that includes multi-protocol label switching tunnels, corresponding to the tunnels, at least one of the network devices comprising an egress interface of one of said multi-protocol label switching tunnels, wherein the interfaces and the customer policy are associated with a same role name." Response Ex. 4, '630 Patent at 11:42–49.

at 12–13. The claims' failure to do so is antithetical to the requirement of "precision and definiteness of claim language" and "the 'requirement that the language of the claims must make it clear what subject matter they encompass.'" *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1562 (Fed. Cir. 1996); *see also* 35 U.S.C.A. § 112(b) (2012) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or joint inventor regards as the invention."). Here, the term "policy targets" is not explained or introduced via the claim language and, as a result, is unclear, imprecise, and indefinite.

Further, it remains unclear just *what*, exactly, a "policy target" is or how it relates to the other elements of the purported invention. The United States Patent and Trademark Office recognizes that claims may be found indefinite under § 112(b) where "a claim *fails to interrelate* essential elements of the invention as defined by applicant(s) in the specification." Manual of Patent Examining Procedure § 2172.01. The claims reciting "policy targets" do not explain how the policy targets function, or how they interrelate with the other elements of the purported invention. Rather, the policy targets are amorphously defined, and appear to be merely "floating in space," without any indication as to how they interact with the other claimed elements. For example, even if the policy targets *are* some form of a "network device," the claims provide absolutely no indication as to how these policy targets connect, interact or relate to the claimed "article," the claimed "storage medium," or the claimed "at least one device" that executes the instructions stored within the "storage medium." Similarly, the claims provide no indication as to how these policy targets physically or conceptually interact with other elements of the claimed invention, such as the "interface," the "egress interface," the "multi-protocol label switching tunnels," or the "assigned [] role name."

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WSOU's reply arguments do not shed any light on this issue of imprecision and uncertainty. WSOU states "HPE's confusion seems to be an inability to accept that some devices within the network, such as routers, will function as policy targets—where routing assignments based on the mapping policy, the network policy and/or the customer policy are enforced—while another device within the network will operate as the policy server and allocate resources by sending or deploying the policies to the targets." Reply at 14. Yet this insufficient explanation seems designed to give WSOU the ability to merely pick and choose what it would like to constitute (and not constitute) a "policy target" within the Accused Products—that is precisely what the definiteness requirement is intended to preclude.

Ultimately, the term "policy targets" lacks a proper antecedent basis, and the claims lack any recognizable indication as to how the policy targets interrelate, coordinate, or interact with the other essential elements of the claimed purported invention. As a result, this term and its accompanying claims are indefinite.

III.   THE '832 PATENT CLAIM TERMS

A.   "information data representative of at least two chosen criteria" (claim 1)

WSOU proposed a new construction for this term in its Reply. Reply at 15. Although HPE believes its originally proposed construction is correct, in the interest of narrowing the dispute for the Court, HPE agrees to WSOU's new proposed construction of "information data representative of at least two numeric values that identify resource characteristics and available connections between nodes."

B.   "a processing means for . . ." (claim 1)

WSOU does not dispute that Claim 1 of the '832 Patent is subject to a presumption that 35 U.S.C. § 112, ¶ 6 applies, or that courts routinely hold that the term "processing means" is subject to § 112, ¶ 6. *See* Response at 19. Instead, WSOU wrongly asserts that this presumption

"has been overcome because the claim itself connotes sufficient structure." Reply at 16. More

specifically, WSOU asserts that the claim recites "step-by-step instructions [that] confer

sufficiently definite structure to overcome the presumption that § 112, ¶ 6 applies." *Id*. But

WSOU's main justification for this conclusion is to parrot the claimed list of functions, with little

explanation of what it is that allegedly transforms those functions into structural limitations.

This is the wrong approach. *Digital Retail Apps*, 2020 WL 376664, at *5–7 & nn.2,4 (finding

claim indefinite and noting that the argument that the three claimed functions constitute the

"algorithm" is "completely circular"; "a patentee cannot provide 'structure' by pointing to

another function element"). Where WSOU does make some attempt to explain, it relies heavily

on the specification to find the "structure"—which is how means-plus-function claims are

supposed to work. Reply at 17–18. In so doing, WSOU proves the opposite of its intended

point: § 112, ¶ 6 applies.

Beyond that, WSOU finely parses the claim language and treats any references to

physical devices as evidence that the claim recites sufficient structure to avoid § 112, ¶ 6. Reply

at 17–18. But WSOU provides no authority to suggest that the mere mention of one or two

physical devices in a 178-word-long function is sufficient to avoid construction under § 112, ¶ 6.

That is not the law; the correct inquiry is "whether the words of the claim are understood by

persons of ordinary skill in the art to have a sufficiently definite meaning as the name for

structure." *Williamson*, 792 F.3d at 1348 (Fed. Cir. 2015). Critically, it is the structure itself—

and not the functions that the structure executes—that must impart such a definite meaning to

avoid construction under § 112, ¶ 6. *Id*. at 1349–51. While some of those functions in the '832

Patent are described with reference to other components (e.g., "ensuring the connectivity of said

multiplicity of label switched routers"), that is not relevant to the question of whether the claim

is subject to § 112, ¶ 6.

The only structure recited by Claim 1 is a "processing means" that must execute the six-part claimed function. Response Ex. 8, '832 Patent at 11:43–67. As HPE explained in its responsive brief, courts have consistently held that the recitation of a "processing means" for executing various functions renders a claim subject to § 112, ¶ 6. Response at 19. Even the sole case WSOU relies on in its Reply—*Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1384–85 (Fed. Cir. 2011)—affirms that Claim 1 of the '832 Patent must be construed under § 112, ¶ 6. That case addressed the question of whether the phrase "means for cross-referencing" was indefinite under § 112, ¶ 2 for failing to disclose the corresponding structure for the function recited in the claim. It was undisputed that the claim term itself was subject to § 112, ¶ 6. *Id.*

Since, as HPE stated in its responsive brief, the specification discloses no corresponding structure for the functions listed in the claim, it is indefinite. Response at 20–21. WSOU does not directly address this argument in its Reply, but instead provides numerous citations to the portions of the specification it believes provide written description support for the various functions recited by the claim. Reply at 16–18. Critically, WSOU fails to explain how any of those sections of the specification provide structure that would render the claim definite under § 112, ¶ 2. The "processing module" described in the specification is merely a general purpose computer, essentially a "black box," that is said to execute the described functions. *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) ("For computer-implemented means-plus-function claims where the disclosed structure is a computer programmed to implement an algorithm, 'the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.'" (quoting *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999)). Since the specification

describes only the functions that the processing means must carry out—but not how it does so—Claim 1 of the '832 Patent is indefinite.

> **C.   "deducing an ideal solution from performances of said possible paths on at least one of said criteria" (claim 1)**

WSOU's Reply makes arguments inconsistent with the evidence it cites and thereby reaches the wrong conclusion about the meaning of this claim term. The specification of the '832 Patent states the ideal solution is calculated from various components associated with certain criteria. As the specification continues, "[f]or each criterion Cp, the best performance value Z*p **observed over the possible paths is extracted**." Response Ex. 8, '832 Patent at 8:33–44 (emphasis added); Reply at 19. This language demands that the best performance value for each criterion is *observed* over the possible paths before it is extracted. WSOU acknowledges that the best performance value is "extracted," but ignores the rest of the sentence by arguing that the performances should not be "observed." Reply at 19–20. WSOU offers no explanation for how a best performance value could be extracted without first observing the value.

Further, WSOU argues that it is wrong to observe "all possible paths" to calculate the ideal solution. *Id*. But the specification requires observing the best performance criteria over "*the* possible paths"—not a subset of the paths. Response Ex. 8, '832 Patent at 8:33–44 (emphasis added). Indeed, if the performance of some paths were not observed, it would not be possible to determine which one had the best performance, since one of the unobserved paths could perform better than the others. WSOU similarly provides no explanation for how an "ideal" solution could be calculated without knowing the performance of all the possible paths so that the device would "know" which one is ideal.

PUBLIC VERSION

IV.   THE '056 PATENT CLAIM TERMS

A.   "VC label in a layer 2 MPLS label stack" (claims 1, 18, 21)

HPE and WSOU have agreed to the construction "the bottom label in a layer 2 MPLS label stack consisting of a top tunnel label and a bottom virtual circuit label, which is used by an egress label edge router to process the packet" for the claim term "VC label in a layer 2 MPLS label stack."

B.   "dynamically determined" (claims 1, 18, 21)

In reply, WSOU attempts to dispute that "dynamically determined" is an ambiguous term, but ends up confirming its ambiguity by conceding that there were a large number of strategies, factors, and steps for determining an LSP. *See* Reply at 20. WSOU then fails to identify any way the '056 Patent (or the extrinsic evidence) resolves which, if any, of these approaches makes an LSP "dynamically determined." WSOU alleges that the patentee "particularly point[ed] out and distinctly claim[ed]" the invention, but does not say where or how. Reply at 21.

Instead of stating what it means for a label switched path (LSP) to be "dynamically determined"—which neither of WSOU's briefs actually do—WSOU focuses on what an LSP is used for. In so doing, it answers the wrong question.

First, WSOU argues that, because the *prior art* contains many different, and distinct, options for determining an LSP, that the '056 Patent necessarily covers all of these options. *See* Reply at 20. WSOU's putative support for this, *S3* holds that the patent need not restate the teachings of all of the prior art, but does not absolve the patentee of its obligation to present definable claims. *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001). Simply gesturing to a large body of knowledge and laying claim to it is insufficient; the patent must translate that knowledge into "meaningfully precise claim scope." *Halliburton Energy Servs.*,

Inc. v. M-I LLC, 514 F.3d 1244, 1253 (Fed. Cir. 2008) ("While patentees are allowed to claim their inventions broadly, they must do so in a way that distinctly identifies the boundaries of their claims."). Here, "dynamically determined" is so vaguely defined that a skilled artisan of the time is not only unable to identify the scope, but would also be incapable of identifying whether it covers any future developments in the field.[6]

Second, WSOU argues that it is not required to identify a "complete list of factors" related to LSP selection. Reply at 20. In support, WSOU cites *Biosig* for the proposition that breadth is not indefinite. *Biosig Instruments, Inc. v. Nautilus, Inc.*, 715 F.3d 891, 902 (Fed. Cir. 2013). The limitation in *Biosig* was a "spaced relationship" that had limited "inherent parameters," namely that it could never be larger than a user's hand—thus there was a natural upper bound that could be identified. *See id.* Here, there is no such upper bound—the techniques and factors used to determine LSPs represent factors that were not only substantially varied at the time of invention, but are ever changing with the development of new technology.[7] For example, a practitioner would have no way of knowing whether "dynamically determined" refers to dynamically allocating resources to a single LSP or dynamically switching between different LSPs. *See* HPE Resp. Br. (Dkt. No. 39, "Response") Ex. 11, Min Decl., ¶ 42.

Third, WSOU's reliance on portions of the '056 Patent's specification is off the mark. WSOU cites to specification language that explains the LSP is "dynamically determined" by the

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[6]"The statutory requirement of particularity and distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what went before in the art and clearly circumscribe *what is foreclosed from future enterprise*." *Halliburton*, 514 F.3d at 1249 (citing *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942)) (emphasis added).
[7] HPE has established that even at the time of '056 Patent filing, the variability and distinctness of techniques available would have rendered the term ambiguous. *See* Response Ex. 11 ¶¶ 40–44, 49–52 (discussing the various techniques and strategies available in the relevant time period, each of which would substantially alter the claimed invention).

LDP or in the alternative by the unclaimed RSVP. Reply at 21. Simply repeating that an LDP

can determine an LSP and what that LSP is used for does nothing to define what "dynamically

determined" means. Rather, the fact that WSOU found these citations to be its best option

showcases just how poorly the term is described in the '056 Patent specification. Here, the

patent has a claim term which may or may not be tied to multiple different methods, each having

have a substantially different outcome, and yet the patent provides no guidance on which, if any,

existing methods are "dynamically determined." Similar terms have been found indefinite. *See*

Ball Metal Beverage Container Corp. v. Crown Packaging Tech., Inc., 838 F. App'x 538, 542

(Fed. Cir. 2020) (collecting cases and finding a claim indefinite when "(1) different known

methods exist for calculating a claimed parameter, (2) nothing in the record suggests using one

method in particular, and (3) application of the different methods result in materially different

outcomes for the claim's scope such that a product or method may infringe the claim under one

method but not infringe when employing another method").

 The Court should therefore find this term indefinite.

PUBLIC VERSION

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PUBLIC VERSION

CERTIFICATE OF SERVICE

I hereby certify that on the 23rd day of April 2021, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system which will send notification of such filing to the following:

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